

CLAIMS

What is claimed is:

1. A method for releasing polymers from an array of polymers comprising the steps of
5 providing a substrate;
attaching a linker comprising a releasable group to the substrate, wherein said releasable group is labile under a set of conditions;
attaching a first monomer to the linker;
attaching a second monomer to the linker or to the first monomer
10 repeating said step of attaching a second monomer until a polymer is synthesized;
and
releasing said polymer using the set of conditions.
2. The method of claim 1 wherein said monomers are nucleotides.
3. The method of claim 1 wherein said releasable group comprises a photogroup.
- 15 4. The method of claim 3 wherein said photogroup is activated by light having a wavelength of 313 nm and below.
5. The method of claim 1 wherein said monomers are amino acids.
6. A releasable polymer array comprising a substrate having a linker comprising a releasable group which is labile under a set of conditions and attached to said linker a
20 polymer, wherein said polymer can be released by exposure of the array to the set of conditions.
7. A releasable polymer array according to claim 6 wherein said polymer is a nucleic acid.
8. A releasable polymer array according to claim 7 wherein said nucleic acid is an
25 oligonucleotide.
9. A releasable polymer array according to claim 6 wherein said releasable group comprises a photogroup.
10. A releasable polymer array according to claim 6 wherein said polymer is a peptide.

11. A nucleic acid array having a releasable nucleic acid probe, said nucleic acid array comprising a substrate having attached thereto a nucleic acid probe, said nucleic acid probe comprising a releasable group which is labile under a set of conditions wherein said releasable group allows release of the probe upon activation.

5 12. A nucleic acid array according to claim 11 wherein said releasable group comprises a photogroup which may be activated by light having a wavelength of 313 nm and below.

13. A method for fabricating a polymer array having releasable polymers, said method comprising the steps of:

10 providing a substrate;

attaching a linker to said substrate, said linker comprising a releasable group which is labile under a set of conditions;

reversibly modifying said releasable group with a protecting group to provide a reversibly modified releasable group wherein said modified releasable group is not labile

15 under the set of conditions;

attaching a first monomer to said linker;

attaching a second monomer to said linker or to the first monomer;

repeating said step of attaching said second monomer until a polymer is provided; and

demodifying said reversibly modified releasable group.

20 14. A method for fabricating a polymer array according to claim 13 wherein said releasable group comprises a photogroup.